

A Tale To Be Told, By Kindergarten Students:

Using Web-based Tools To Enhance Students' Writing

Action Research Project CI 515

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April, 2012

Introduction

The purpose of the study was to examine Kindergarten students using web-based technology to publish their writing. With the increased emphasis on using computers to socialize the writing process, research affirms that the quality of writing is for improving students especially when constructive writing environments are present with technology (Daiute, 1985). Previous research has focused on writing mechanics, I concentrated on the writing content, including the writers' ability to add pictures to tell their story. For early writers, computer technology adds to their developing writing skills through improving their ability to use word processing software and make revisions to their writing (Ihmeideh, 2009).

In conducting my research kindergarten students published two personal narratives, the baseline was written using paper and pencil, the intervention piece was published using the web-based program, *Little Bird Tales*. Both narratives were assessed using a writing rubric on the authors' ability to combine pictures and text to narrate a single story. Surveys were completed after using *Little Bird Tales* to gain feedback from the participants on the use of technology during the writing process. In addition to the surveys interviews were conducted to offer a deeper insight on the use of the web-based tool.

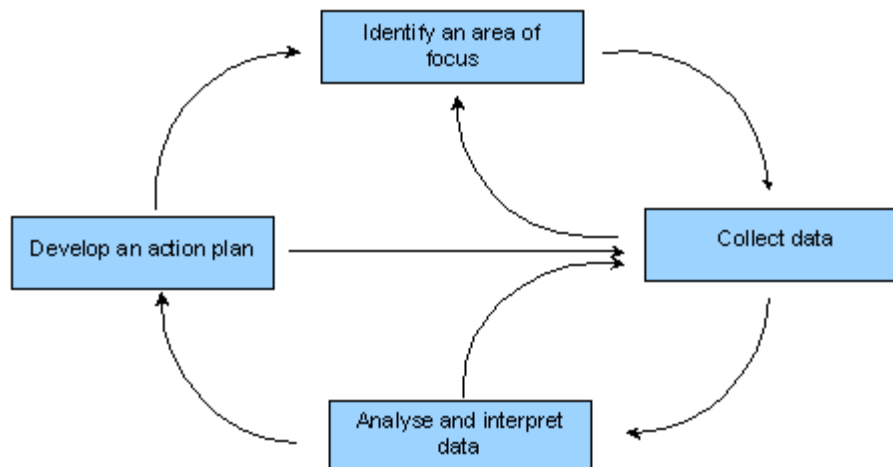


Figure 1. Dialectic action research spiral (Mills, 2011, p.19)

The action research model I choose to use for this study was the Dialectic Action Research Spiral from Mills (2011) shown in Figure 1. I choose this method because it spirals back to collecting data and identifying an area of focus. I continuously went back to both of these things to clarify and rewrite my research questions.

The first step in the action research process is to identify an area of focus. I wanted to conduct action research using technology, but it was difficult to choose what kind of technology and then how to make my focus specific enough to complete given the time frame. After discussion with my co-teacher, we decided I would study how technology use affects student’s writing. My initial search to find research article and journals on this topic was content overload; instead I had to work to be more specific. Appendix A includes the research I read during my initial search. Considering my teaching philosophy and the age of my participants I wanted to assess the writing content rather than the mechanics. However, much of what I found on writing in the primary grades was focused on mechanics. I knew I wanted to go deeper. I decided to

review the Iowa Core Curriculum (2011) to determine what is expected of kindergarten students. One of the standards for kindergarten states students must show they can use a combination of drawing, dictating, and writing to compose informative/explanatory texts in which they name what they are writing about and supply some information about the topic. (W.K.2.). With that information, I updated the writing rubric my co-teacher, and I used to assess student’s January writing to reflect the skills I wanted students to show using *Little Bird Tales*.

The next step in Mills’ Dialectic Action Research is to collect data on what has already been done (pg 19). I used EBSCO and Google Scholar to retrieve researched conducted on the kindergarten writing process, using web-based applications in the classroom, and the quality of writing in elementary. Next, I collected data on the participants for this study by assessing their writing from February, which was written on paper, then compared it to their March writing using technology. Last, I analyzed the data to measure how technology affected students’ writing.

In my action research project, the following parts will be presented: an area of focus statement, research questions, a review of related literature, an explanation of the innovation, a description of the membership, negotiation that were undertaken, a timeline for the project, data collection and analysis, findings, and last, the action planning steps. The next section with detail the area of focus, including the big ideas.

Area of Focus Statement

The big ideas of this action research project are:

- to explore the effects of technology use in the publishing process for kindergarten students (stays on topic, shares details, ect...)
- to examine how well students stay on task when using technology during the writing process
- to discuss the use of technology (ease of use, amount of time, enjoyability)

The purpose of this study was to describe the effects of using the web-based program *Little Bird Tales* with kindergarten students and how that experience affects students' writing ability as they create pictures that help them develop text that narrates a single event. Each kindergarten student will use a combination of drawings and writing to narrate a single event or several loosely linked events.

Kindergarten students will learn how to use *Little Bird Tales* through large group instruction and modeling. Then students will create a storyboard. Once the storyboard is complete students will use a laptop to complete their stories using the web-based tool. After students complete their writing project the teacher will assess the *Little Bird Tales* project using the writing rubric (see Appendix B) that our classroom has used for the past two months. My co-teacher and myself will assess their finished products.

Most of the research conducted in this area has focused on upper elementary students, what I did find focused on word processing and how it effects editing. There is little research documented using kindergarten students. There is a gap in the literature

that describes how students, especially younger students, might combine text and pictures to tell a story using a web-based tool. Students in my classroom have a lot of experience using technology throughout the school day, so they have learned to use it as a tool during Writer’s Workshop, math, and centers. For example, my students already have experience with writing using *Kidblog*, and creating artwork using *Kerpoof*, but now they will get the opportunity to use these skills to tell a story. The next section will explain the research questions for my action research plan.

Research Questions

1. How does using a web-based program (e.g., Little Bird Tales) during the writing process affect kindergarten students’ writing ability to combine pictures and text while narrating a single event?
2. How does feedback from kindergarten students’ change after the use of technology during the writing process?

Review of Related Literature

Introduction

This literature review will examine research on using technology throughout the writing process. This review will focus on two topics: using technology to improve the students' writing ability when they used a web-based technology to publish students' writing. With the increased emphasis on using computers to socialize the writing process, research affirms that the quality of writing is for improving students especially when constructive writing environments are present with technology (Daiute, 1985).

Using Technology to Improve the Quality of Writing

The computer has become a natural writing environment for students (Gnach, Wiesner, Bertschi-Kaufmann, & Perrin, 2007). A computer with Internet access can be an effective combination for classrooms where budgets are tight, but curriculum standards are high (Robin, 2008). It is important that teachers receive instruction on effective ways to use multimedia to motivate their young writers to become more engaged in learning new content (Robin, 2008).

Writing is a skill students acquire and use when communicating beyond spoken words. Writing has always been seen as a solitary process, but now it has become an interactive and cooperative activity (Gnach, Wiesner, Bertschi-Kaufmann, & Perrin, 2007). One form of writing that is taught and assessed in the elementary classroom is narrative writing. A personal narrative is the most popular type of digital story where

the author writes about a personal experience. The stories can be about significant events in the writer’s life (Robin, 2008).

Past research has concentrated on word processing and the effects of technology on writing mechanics. With the use of word processing in writing, technology has done little to strengthen the writing process and improve instruction (Warren, Dondlinger & Barab, 2008). It is important to use technology beyond word processing for multimedia projects in the classroom. People process visual information much more quickly than narrative information, which makes visual literacy essential in 21st century skills for students to master in our schools today (Porter, 2006).

Writing quality has been a focus of previous research. Word processing software has been used to document the frequency of revision and word count. There is no clear effect on students’ writing quality, but word processing software does increase the frequency of revision (Bangert-Drowns, 1993). Cirello (1986) determined that word processing had a positive effect on student’s writing, while Rosenbaum (1987), concluded the opposite (Bangert-Drowns, 1993). Results were similar when Cochran-Smith, Paris, and Kahn (1991) found students who used word processing produced lengthier writing and were writing with fewer errors. However, word-processing itself did not impact the quality of student writing overall (Golderg et al., 2003). It is important to note that students with learning disabilities, early elementary-aged student and college-aged students show the greatest effect on writing quality when using a computer (Golderg, et al., 2003). For early writers, computer technology adds to their developing writing skills through improving their ability to use word processing software and make revisions to their writing (Ihmeideh, 2009).

Yancey (2004) states that “helping writers develop fluency and competence using different types of technologies is an important part of teaching writing in this century” (p. 38). According to the College Board et al., the National Writing Project and Phi Delta Kappa International (2001) as new technologies such as web-based writing tools emerge, it is becoming more apparent that rich writing skills, which include the use of multimedia, text, and audio to create projects, will be needed in the real world. The project by the College Board et al., (2001) brings attention to technology as it is revolutionizing writing.

Some studies show access to word processing software improved the quality of students’ writing (Bandert-Drowns, 1993). Goldberg et al., (2003) reported that early elementary students produce higher quality and lengthier work when they use technology during writing. However, the discrepancy of the quality of writing depends on the students’ ability to write without the use of technology, with low ability students showing the greatest increase (Bandert-Drowns, 1993). A study conducted by Englert, and Manalo (2004) found students who used technology wrote more and used more writing strategies, and showed sharper conventional writing skills. In addition, eight out of ten young writers admitted technology allowed them to present their ideas clearly (Clark & Dugdale, 2009). Research indicated that student motivation increases when using technology to write which then leads to improved writing quality (Bandert-Drowns, 1993). When writers use a computer to write they make more decisions than when they write with paper and a pencil, which makes them more aware of the writing process (Gnach, Wiesner, Bertschi-Kaufmann, & Perrin, 2007).

Students feel more of a sense of ownership with the finished product and have

increased motivation and understand the process it took to get the project done when they used technology (Fan & Orey, 2001). Robin (2008) found the same conclusions; the use of technology can have a more meaningful effect when students engage in high order thinking skills.

There are multiple ways to assess students' writing. Students writing should be measured from the developmental perspective, as the students' visible language, regardless of their developmental stage (Watanabe & Hall-Kenyon, 2011). The quality of their writing needs to be measured on their intended communication and representation of the student as an author instead of quantity (Watanabe & Hall-Kenyon, 2011). When you put technology in the equation, the quality of writing may depend on how efficiently children can communicate their thoughts through typing (Coker & Ritchey, 2010). As written by the College Board, the National Writing Project and Phi Delta Kappa International (2001).

... To Epstein technology and writing are equally important and intrinsically linked to today's modern world... illustrating your writing, learning how to manipulate things – sound, text, images – it is a digital, multimedia world these kids are moving into. They're going to have to and want to participate fully in that multimedia world. And if we can get them ready for it now, it's just going to be that much easier. They're going to have teachers in middle school who are going to say, 'I want a multimedia project using Movie Maker on Christopher Columbus and early colonization. Put it together and e-mail it to me,' and these kids are going to have to do this at home. ... Their boss might say, 'I want a presentation,' or their girlfriend might say, 'If you can't do multimedia, I'm not interested,'”

says Epstein. (p. 12)

Using technology can be difficult in the early grades because of the lack of experiences students have with computers. According to the College Board, the National Writing Project and Phi Delta Kappa International (2001), teachers must find a way to expose young students to these new tools (i.e. computers) and build their confidence levels. New communication devices have transformed the way we write in our everyday lives. Technology should not be forced, it needs to be integrated with something that is already being taught which meets specific curriculum outcomes and learning objectives (Kervin & Mantei, 2009). Teaching writing needs to be exciting and filled with meaningful experiences that hook children's interests and enriches their experiences (Ihmeideh, 2009).

There are many options for students and teachers to explore when looking to publish writing; using technology to publish their work is one. With access to the Internet, there are web-based tools that are student friendly, and are being used more and more with younger children.

Using web-based technology for student writing

Traditionally, students have used word processors to write with when using technology. Now, more web-based tools are available for students to use. Using a web-based program instead of word processing software engaged students in creating their own multimedia learning environment (Fan & Orey, 2001). Other educational theorists

believe students who are involved in creating multimedia projects have a huge potential for improving their creativity, problem-solving skills, and their knowledge and skills in writing (Fan & Orey, 2001). Students can share their work with family and friends over the Internet when using these web-based environments. Studies have shown students enjoy writing when they can share with their family and friends, instead of just sharing with their teacher (Clark & Dugdale, 2009). In addition, Goldberg, Russell and Cook (2003) reported that students who use computers to write, revise as they go and share their work with peers, making it a social process.

Using a web-based application, such as *Little Bird Tales*, provides an opportunity for students to create multimedia projects. For many students it is easier to focus on their writing and to improve their writing methods when they use both visuals and words (Yancey, 2004). When using a web-based environment, students can incorporate visuals, audio, and feedback from peers and family, which can potentially increase learner motivation (Warren, Dondlinger & Barab, 2008). Lan, Hung, and Guse (2011) reported that a web-based learning environment gave students opportunities to integrate media such as, text, media pictures, and audio. Their results indicated that students had a higher interest in writing and increased willingness to learn when using such tools (Lan, Hung, & Hsu, 2011). Thus, using a web-based environment provided elementary students with a personalized user interface that increased usability and the power of a computer while in the hands of young students.

Not only does a web-based writing environment increase young writers' interest, happiness, and motivation, but it also increases their fun of learning (Lan, Hung, & Hsu, 2011). Clark and Dugdale (2009) stated web-based writing environments engage

students to be more creative and are designed to entertain an audience beyond the classroom, which exceeds writing curriculum standards in most schools (Clark & Dugdale, 2009). Web-based environments also teach technology literacy skills which is “the ability to use a computer and other technology to improve learning, productivity, and performance” (Robin, 2008, p. 224).

Summary

Yancey (2004) encourages teachers to rise to the challenge:

From a technological perspective, it was probably easier to teach writing 100 years ago – and it was certainly cheaper. Teaching student writers to navigate between digital and pre-digital technologies in their writing – and even to us new technologies to reflect on their writing process – makes for an ambitious, complex writing curriculum. But it’s the curriculum we need to deliver if we want to prepare students to write in the 21st century – which, as it happens, has already arrived. (p. 40)

It is crucial that schools adapt to a curriculum that students enjoy and where they are engaged in different kinds of writing to demonstrate that writing is more than a forced task: it is an essential life skill (Clark & Dugdale, 2009). Teachers believe students can not write, therefore, they are not giving them the opportunity to write (Watanabe & Hall-Kenyon, 2011). In today's classrooms, there is still a disconnect between technology which is used in everyday life and technology which is used in

classroom (Dede, 2005 ; Kervin, & Mantei, 2009).

As the use of technology increases in classrooms, students will have opportunities to create published work, that far exceeds what is possible with word processing. Students must be able to capitalize on opportunities to explore and learn while utilizing a variety of technology tools and experiences within the learning environment. The next section will explain the innovation of my action research project.

Innovation

The instruction for this action research was consistent with the routine of writer's workshop in January and February. Students were engaged in writing for 30-40 minutes every afternoon. Kindergarten students were introduced to *Little Bird Tales* by viewing student examples from the previous school year. I choose this web-based writing environment, *Little Bird Tales*, because it is easy to operate; navigation and graphics are child-friendly as far as the font, font size, and the form and placement of the icons. Students can also record audio to go with their stories.

During the first phase of the study, students created a storyboard to organize their self-selected topic across 4 pages. The storyboard had to include a title, four pictures, and text to go with each. When the participants completed the first phase which took about two days they were instructed on how to use the web-based application *Little Bird Tales* to publish their writing. “Teachers need to be diligent about requiring scripts and storyboards as a readiness ticket before using any technology (Porter 2006, pg 29).

Next, the participants spent a day learning how to use *Little Bird Tales* through large group instruction by modeling how to create a class book as a class. After students complete their writing project both teachers will assess it using the writing rubric. Our classroom has used the writing rubric twice in the last three months. Their February pencil-paper writing will be compared to their published work completed on the computer. The next section will provide details about the participants, along with the research environment where the action research project took place.

Membership of Action Research Group

This action research took place at an elementary school in a suburb of a large midwest city. The school district consists of five elementary schools grades PreK-5, one middle school grades 6-8, and one high school grades 9-12. There were 45 students who participated in the innovation, 21 of them are assigned to my classroom. The students are ages five or six and attend full-day kindergarten. My classroom consists of 14 boys and 8 girls. There are six students who qualify as English Language Learners (ELL) of those students, three of them receive reading services by a ELL teacher. The percentage of students in my classroom who receive free or reduced lunch is 52.1%. Included in my classroom are three students who receive Title 1 Reading and scored below-grade level on the district reading assessment at our winter benchmark. In addition to ELL services one of the ELL students receives a writing intervention in a dual-language environment.

The members of my team who helped with my research include myself as the researcher, my co-teacher, a special education associate, and one ELL teacher. I was

the lead teacher during the majority of the writing and technology instruction. My co-teacher and I were responsible for our own students during writers’ workshop time in classroom room. In the computer lab, all three of us were responsible for helping students. The special education associate helped students login and minor troubleshooting. My co-teacher was also in charge of recording audio because of technical difficulties with my laptop computer.

I have taught kindergarten for the past six years and have included writer’s workshop as a part of our day for five years. This was the first year my co-teacher taught kindergarten but has had experience using *Little Bird Tales* while teaching Title 1 students last year. She became interested after she saw stories the kindergarten students created.

This was my second year using *Little Bird Tales* in my classroom. The first year we completed this unit we used the storyboard and had students complete their tales using laptop computers in the classroom. This year we were able to show exemplars, and we completed a class tale to model how to use *Little Bird Tales* using a digital projector. This year we used the computer lab because we wanted every participant to have a computer to use during writers’ workshop.

Students in this study were familiar with the use of technology. Our classroom uses the computer lab at least once a 6-day cycle for 30 minutes. They have used Word, the Internet, digital cameras, and iPads. We have used the computer lab during computer lab time for writing, but not during writer’s workshop. Students have used Kidblog to write on their blog. They have written journal entries and have included pictures to show their learning of the seasons, and created a picture to be used as a story

starter. They experienced creating artwork using Kerpoof. This was the first time these experiences were merged together in one multimedia project.

The computer lab used in this study was equipped with 36 iMac computers. The room also has a digital projector connected to an iMac computer in the back of the room. With 45 participants we also used MacBooks from a laptop cart, so each student had a computer. My co-teacher and myself used our MacBook Pros to record audio in a quiet spot in the media center. For a few students who finished late, they used the four iMac and two MacBooks that were in our classroom. The next section includes a description of the negotiations taken to conduct research.

Negotiation to be Undertaken

To protect the rights of the participants and to be ethical, I asked for permission from the school principal to conduct this action research project in our kindergarten classroom. After reviewing my research materials, he granted me verbal permission to conduct this research, as well as to collect and analyze the data from this research. The names of the school district, school, and teachers involved, have not been mentioned, students are given numbers to protect their anonymity. The next section details the timeline of my research project.

Timeline

Table 1

Timeline of events

January - March	Identify the area of focus, write research questions, review related literature, write a draft of literature review
March 27 - April 3	Collect data, complete the intervention, includes instruction, model whole class, and student work time on <i>Little Bird Tales</i>
April 4 - April 7	Conduct surveys and interviews, revise literature review
April 7 - April 14	Data analysis and interpretation
April 15 - April 20	Continue data interpretation and write up findings
April 21 - April 26	Complete action research and create presentation
April 29	Present project to class

This research project was a short-term study conducted in three weeks during the third trimester. Table 1 shows a timeline my action research project. The next section describes how the data were collected and analyzed for my action research project. The next section will go into detail how to collected data and analyzed it.

Data Collection and Analysis

In this section, Data Collection and Analysis, I will describe how data were collected to answer the research questions using the below data sources. The data

were recorded from the 21 students assigned to my classroom. Mills (2011) describes the importance of using more than one source to answer research questions. The triangulation table is described in Table 2 below.

Table 2

Data triangulation

Research Questions	Data Source 1	Data Source 2	Data Source 3
1. How does using a web-based program (e.g., <i>Little Bird Tales</i>) during the writing process affect kindergarten students' writing ability to combine pictures and text while narrating a single event?	Baseline score using Writing Rubric	Intervention piece using Writing Rubric Teacher 1	Intervention piece using Writing Rubric Teacher 2
2. How does feedback from kindergarten students change after the use of technology during the writing process?	Student Post- Little Bird Tale Survey	Students reflection blog	Student Interviews

As stated in the table above, the data for this collection were gathered using a baseline score from the student’s writing in February (see Appendix C for examples), their *Little Bird Tale* published story, a post-*Little Bird Tale* survey (see Appendix D), and guided interviews.

To answer the first question, how does using a web-based program (e.g., *Little Bird Tales*) during the writing process affected kindergarten students’ writing ability to combine pictures and text while narrating a single event, through a baseline and intervention piece a comparison was done using the writing rubric. The rubric consists of objectives which are stated in the Iowa Core Curriculum that all kindergarten students are expected to do. I condensed the original writing rubric to four standards that I wanted students to focus on while using *Little Bird Tales*.

1. Writer stays on topic.
2. Writer adds details to picture and writing.
3. Writer uses complete sentences.
4. Writer stays on task.

Table 3

Definitions of Point on Rubric

3	2	1	0
Clear use of skill consistently throughout writing samples. Great effort! No errors.	Demonstrated awareness of skill. Attempted with some effort, but not mastered. Few errors.	Attempted skill, but reflects difficulties. Multiple errors and/or unclear work.	Little or no effort to attempt writing skill. Did not follow basic instructions.

To increase the validity in the study, I conducted an inter-rater reliability test to make sure there was consistency between the scores using the writing rubric. The scores were almost identical to each other. The other teacher did not assess how well the writer stayed on task, because she was not responsible for observing this while in the computer lab. When analyzing the pieces of writing published by students in my class, myself and the other teacher evaluated the *Little Bird Tale* projects individually with the use of the rubric. Names were visible to both myself and the other teacher as they were assessed because it was stated in the audio of the story and their cover page.

Both the baseline and the intervention piece were evaluated, and the data were calculated in a spreadsheet and calculated using statistical measures. The results can be seen in Appendix E. Table 3 above gives an explanation of how points were distributed.

To answer the second question, how does feedback from kindergarten students' change after the use of technology during the writing process, each student completed a post-*Little Bird Tale* Survey to examine what they liked or did not like about their experience. The survey was given in groups of five or six to help students stay on the right question and make sure they understood each question. I read the questions one by one, and partitions separated students to alleviate peer influence. The questions were yes or no questions. Students colored the happy face if they agreed with the statement or the sad face if they did not agree with the statement. Surveys were calculated by percentages of yes's and no's. The results of the survey is shown in Appendix F.

Guided interviews were also conducted after the survey to gain a deeper understanding of student responses. Five interviews were done, including students who

answered ‘no’ on at least one question from the survey. The interviews were transcribed and coded by finding themes and key ideas were given a label which can be seen in Appendix G.

Last, students posted a reflection of their experience to their blog. This was completed in the computer lab. Each student logged into their KidBlog account and wrote a post about their *Little Bird Tale* experience. They were given ideas during instruction to write about their tale, what they liked about their experience, or what they did not like about it. They were also shown how to write *Little Bird Tales* using the digital projector. Before they posted their writing to the class blog, I asked them to read it to me as I transcribe it, in case it was unreadable (displayed under their writing in the post). Appendix H shows five examples of posts students wrote about their experience. The next section details the findings of the action research project along with my interpretations of the data.

Findings

This section presents the findings of the data analysis to address the two research questions; (1) How does using a web-based program (e.g., *Little Bird Tales*) during the writing process affect kindergarten students’ writing ability to combine pictures and text while narrating a single event? (2) How does the feedback from kindergarten students’ change after the use of technology during the writing process?

Results of using *Little Bird Tales* to publish student's writing

To answer the first question I compared the baseline data which was the paper and pencil (p/p) writing with the intervention published writing using *Little Bird Tales* (LBT). The first objective studied was the writer stays on topic. An independent-samples t-test was conducted to compare how well kindergarten students stayed on topic when using pencil and paper or when using Little Bird Tales. There was no significant difference between the pencil and papers scores ($M=2.67$, $SD=.796$) and Little Bird Tale scores ($M=2.71$, $SD=.717$) $t= .67$, $p<.05$. I believe having the students give their storyboard a title helped them to stay on topic.

The second objective assessed how well students added details to their writing. An independent-samples t-test was conducted to compare how well kindergarten students added details to picture and writing when using pencil and paper or when using Little Bird Tales. There was a statistically significant difference between the pencil and papers scores ($M=2.00$, $SD=.837$) and *Little Bird Tale* scores ($M=2.43$, $SD=.811$) $t= .04$, $p<.05$. Based on my experiences as a classroom teacher, I believe this is the results because students had to complete a storyboard. It forced students to give four details, including pictures, to go with their topic. Compared to previous research by Goldberg et al., (2003), early elementary students produce higher quality work when they used technology during writing. Depending on what “high quality” writing was based on in Goldberg’s research, students did add more details when they used technology which I consider “higher quality”.

Objective three assessed how well the writer uses complete sentences in their writing. An independent-samples t-test was conducted to compare how well

kindergarten students used complete sentences when using pencil and paper or when using *Little Bird Tales*. There was no significant difference between the pencil and papers scores ($M=2.57$, $SD=.811$) and Little Bird Tale scores ($M=2.43$, $SD=.746$) $t=.38$, $p<.05$.

The fourth objective assessed how well the writer stayed on task while they worked in the computer lab. An independent-samples t-test was conducted to compare how well kindergarten students stayed on task when using pencil and paper or when using Little Bird Tales. There was no significant difference between the pencil and papers scores ($M=2.43$, $SD=.676$) and Little Bird Tale scores ($M=2.43$, $SD=.746$) $t=1.00$, $p<.05$. As a classroom teacher, I have experienced students using the computer lab I believe this is due to the limited number of adults to help students. We had three adults with 45 students however, one of the adults is not as familiar with the computer and *Little Bird Tales* as the other two are. It was stated in student interviews, when asked about what they did not like about *Little Bird Tales* was “getting on it” (Student 6, interview, 4/10/12). Students had to type in their username and password, along with a school code to get into *Little Bird Tales*. This was difficult for some students which left students off task until they were able to get help. Another student stated “draw(ing) pictures, (there is) a lot of stuff you need to know to do it, like the colors.” (Student 17, interview, 4/10/12). This student she forgot to save her pictures before she closed so she had to redo them a few times.

My interpretation of the writing rubric data is using technology did not hurt the students’ writing. The evaluation results were somewhat the same for both using *Little Bird Tales* and pencil/paper. In kindergarten we introduce many different kinds

of writing, from personal narratives, to persuasive writing, to how-to writing. This was the first time students were given a task of writing more than one page. Usually when students write they use one piece of paper with space at the top for a picture and lines below for words. I did not expect technology to vastly improve their writing because this one the first exposure to *Little Bird Tales*, storyboards, and publishing their writing. I was disappointed with the data from standard 3, writer uses complete sentences. Having worked with students while they were writing their storyboards I thought they all had complete sentences. From my experience with students learning to type in the computer lab, it takes them awhile to find each letter, which leads to writers giving up.

As I reflected on the writer's' ability to stay on task, I questioned what kept them from staying on task in the computer lab. One observation came to mind when students experienced trouble getting logging in to *Little Bird Tales*. This was a distraction, along with students who were sitting next to students who were drawing while they were trying to write. More time was spent on the pictures, than on the writing. Typing for kindergarten students who are still learning how letters, sounds, sentences, spaces, ect... is difficult, and that is expected.

Feedback from kindergarten students' after using technology

From the data obtained through surveys and interviews, most of the students stated they liked using *Little Bird Tales*. When asked if they liked *Little Bird Tales*, 95% of students colored in the happy face. Only one student marked a sad face, but commented while he was filling out the survey that it was “super good, super hard” (Student 17, survey response, 4/10/12). The same was true when students were asked

if they liked using the computer, 95% of students marked the happy face. All of the students marked that like felt they were able to work on their own while using *Little Bird Tales* and that they liked their story, and were happy about how it turned out. The lowest percentage from this survey resulted when I asked if *Little Bird Tales* made them work hard 90% of students agreed. In research completed by Fan and Orey (2001), they reported students felt more of a sense of ownership with the finished product. The last question asked students if they were happy with the way their story turned out, 100% of students agreed, which I believe led to students experiencing a greater sense of ownership.

The interview results were common among students. Four out of five students mentioned that they liked about *Little Bird Tales* were their pictures they drew. Many students also wrote about enjoying being able to draw pictures using *Little Bird Tales* in their blog. In kindergarten, one of our main goals is to instil a joy of writing, after analyzing the data, I can say students enjoyed writing while using technology. Three of five students did not like troubleshooting and management issues while using *Little Bird Tales*. One student mentioned having to login, another mentioned the difficulties with recording their voice while others were talking in the background. The last question was what would they change if they used *Little Bird Tales* again, four out of 5 students mentioned they would write about or draw something else. This is understandable for kindergarteners because we talk about writing something new each time. Also, after they got to watch the other students' stories they want to write about something they saw. The following section is the action planning stage of my action research project.

Action Planning

The next step in the dialectic action research spiral is to develop an action plan. After collecting and analyzing the data, there was an increase in students’ writing quality when they used technology and the feedback was positive after using *Little Bird Tales*. I have a greater understanding of the writing process, especially the importance of having students complete a storyboard.

To ease the troubleshooting and management issues students had I would allow for more to teach students how to login, and show them what to do if they do not login correctly the first time. I would also have older students available to help or students who were able to login successfully. With 45 students working in the computer lab, and both teachers trying to record audio, it left the special education associate, who is not familiar with technology, alone to help students. It would have been more practical to teach the other adult in our classroom, or older students, how to record audio to allow the teacher to be available to help students. Another management idea to try next time would be for students to write their words before they drew their pictures. The pictures took the longest for students to complete, so many of them were getting hung up on that task and not writing their words. If time allowed, I would add a revision step. It didn’t take long for students to finish their projects and were ready to record audio time was moving fast. This led to me spending less time critiquing students’ work and more time trying to get everything done while still managing all of the students. It will be

interesting to see how many students choose to use Little Bird Tales during free-choice writing at the end of the school year.

After completing this action research project, the results can be reported to my kindergarten team, as well as our resource teachers, Title 1 and our English Language Learner teachers. Each one of these teachers could use *Little Bird Tales* to benefit students in their classes. This project could be presented during professional development to show how technology can be used in writing.

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Appendix A *Literature Matrix*

[illegible]

Appendix B Writing Rubric

Name _____

Date: _____

Kindergarten Writing Rubric

3	2	1	0
Clear use of skill consistently throughout writing samples. Great effort! No errors.	Demonstrated awareness of skill. Attempted with some effort, but not mastered. Few errors.	Attempted skill, but reflects difficulties. Multiple errors and/or unclear work.	Little or no effort to attempt writing skill. Did not follow basic instructions.

Writing Goals

Writer stays on topic
 *Urbandale Standard is at least 2 sentences
 Writer adds details to picture and writing

Language Goals

Writer uses complete sentences.

(These are the writing and language goals for kindergarten students from the Iowa Core Curriculum)

Work Habit Goals

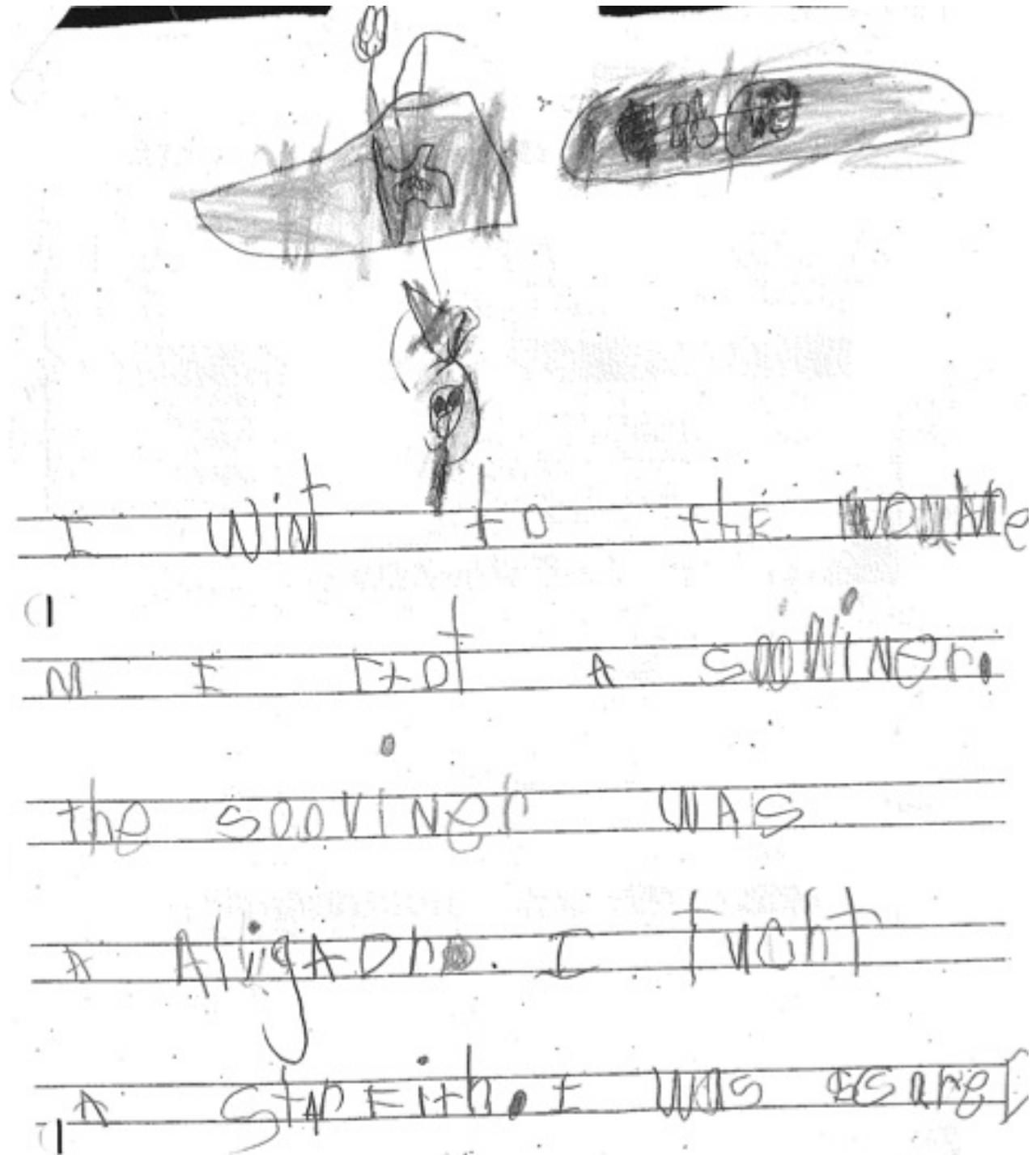
Writer stays on task

Comments:

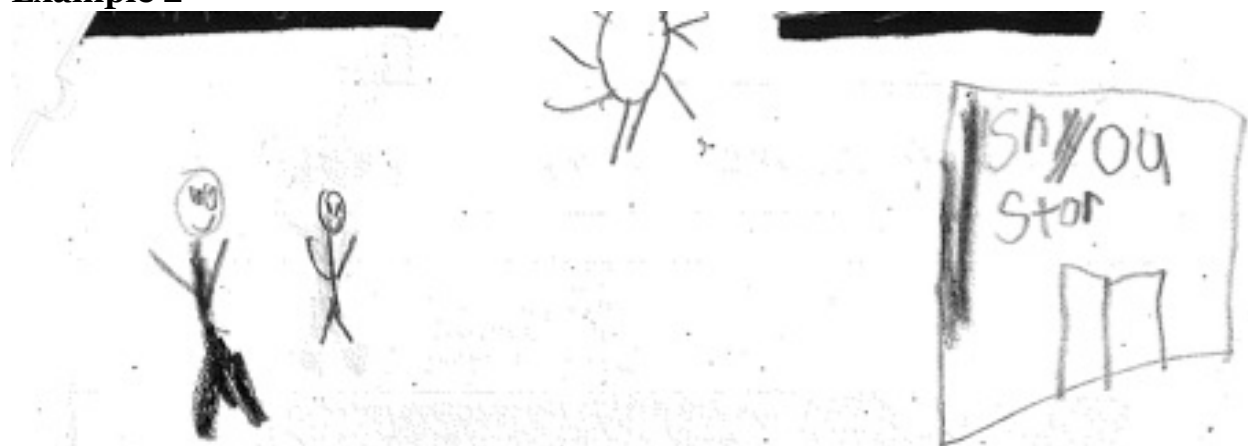


Appendix C Paper Pencil Writing Examples

Example 1



Example 2



I want to the shy you stor

stor get shy you shyous and

I want name to er cace

and I want to hive to get.

ball.

Appendix D Post-Little Bird Tales Survey

Kindergarten Post-Survey

1. I like using Little Bird Tales.



2. I like using the computers to work on writing.



3. Little Bird Tales made me work hard.



4. I was able to work on my own during writing.



5. I liked how my story turned out.



Appendix E Results from Baseline and Intervention Piece

n-21	P/P Stays on Topic	LBT Stays on Topic Teacher 1	LBT Stays on Topic Teacher 2	P/P Writers adds details to picture and writing	LBT Writer adds details to picture and writing Teacher 1	LBT Writer adds details to picture and writing Teacher 2	P/P Writer uses complete sentences	LBT Writers use complete sentences Teacher 1	LBT Writers use complete sentences Teacher 2	P/P Writer Stays on Task	LBT Writer Stays on Task Teacher 1	P/P TOTAL	LBT Total	
Student 1	2	3	3	1	3	3	3	3	3	2	3	8	27	
Student 2	3	3	3	3	3	3	3	2	3	3	2	29	28	
Student 3	3	2	3	1	3	3	3	3	3	2	3	26	26	
Student 4	2	3	3	1	3	3	3	3	3	2	2	26	26	
Student 5	0	0	0	0	0	0	0	0	0	2	0	2	2	
Student 6	3	3	3	2	3	3	3	3	3	3	3	29	29	
Student 7	3	3	2	3	3	3	3	2	3	2	3	27	27	
Student 8	3	3	3	2	2	2	3	3	3	3	3	27	27	
Student 9	3	3	3	2	1	3	3	2	2	3	2	25	24	
Student 10	3	3	3	2	2	2	2	3	2	3	2	25	24	
Student 11	3	3	3	2	2	2	3	3	3	2	3	26	26	
Student 12	1	2	3	1	2	2	1	2	2	2	2	18	19	
Student 13	3	3	3	3	3	3	2	3	2	3	1	3	26	26
Student 14	3	2	1	2	2	3	3	2	2	3	2	23	22	
Student 15	3	3	3	2	3	3	3	2	2	2	2	26	25	
Student 16	3	3	3	3	3	3	3	3	3	3	3	30	30	
Student 17	3	3	3	2	2	3	2	3	3	3	3	27	27	
Student 18	3	3	3	2	3	3	3	3	3	3	3	29	29	
Student 19	3	3	3	3	2	3	2	2	2	3	2	26	25	
Student 20	3	3	3	3	3	3	2	3	3	1	3	27	27	
Student 21	3	3	3	2	3	3	3	2	2	3	2	27	26	
Mean	2.66667	2.71429	2.71429	2	2.42857	2.61905	2.57143	2.42857	2.52381	2.42857	2.42857			
Median	3	3		2	3		3	3		3	3			
Mode	3	3		2	3		3	3		3	3			
sd	0.79582	0.71714	0.78376	0.83666	0.81064	0.74001	0.81064	0.74642	0.7496	0.67612	0.74642			

Appendix F Post-*Little Bird Tales* Survey Results

	Post-Survey Results					
n-21	I like using LBT.	I like using computers.	I worked hard.	I worked on own.	I liked my story.	Comments
Student 1	y	y	n	y	y	
Student 2	y	y	y	y	y	
Student 3	y	y	y	y	y	
Student 4	y	y	y	y	y	
Student 5	y	n	y	y	y	
Student 6	n	y	y	y	y	super hard, "super good"
Student 7	y	y	y	y	y	
Student 8	y	y	y	y	y	
Student 9	y	y	y	y	y	
Student 10	y	y	y	y	y	
Student 11	y	y	y	y	y	
Student 12	y	y	y	y	y	
Student 13	y	y	y	y	y	
Student 14	y	y	y	y	y	
Student 15	y	y	y	y	y	
Student 16	y	y	y	y	y	
Student 17	y	y	n	y	y	
Student 18	y	y	y	y	y	
Student 19	y	y	y	y	y	
Student 20	y	y	y	y	y	
Student 21	y	y	y	y	y	
	yes-20	yes- 20	yes - 19	yes - 21	yes- 21	
	no- 1	no- 1	no- 2	no- 0	no- 0	
	95%	95%	90%	100%	100%	

Appendix G Student Guided Interviews

Little Bird Tales Interview Questions

1. What was the best thing about using Little Bird Tales? (Additional prompt if needed, What did you like?)

Student 1: “Listening to it.”

Student 2: “Writing the picture.”

Student 3: “Doing the picture.”

Student 4: “Liked to draw.”

Student 5: “Color and write works. I like writing words.”

Drawing the pictures, using the different colors.

2. What did you not like about Little Bird Tales? (Additional prompt if needed, What was the most difficult?)

Student 1: “Recording voice while everyone was talking.”

Student 2: “Getting on it.”

Student 3: “Didn’t like spelling the words.”

Student 4: “Nothing.”

Student 5: Draw pictures, a lot of stuff you need to know to do it, like the colors.”

Troubleshooting issues, logging in, recording their voice, learning how to use the draw tools.

3. What would you change if you used Little Bird Tales again? (Additional prompt if needed, If you used Little Bird Tales again what would you do differently?)

Student 1: “Write about Nijova.”

Student 2: “The pictures.”

Student 3: “Didn’t like spelling the words.”

Student 4: “Write something else.”

Student 5: “Designs different, how I make the shirts.”

Write and draw about something else.

Appendix H Example of Kidblog Blog Posts



I like recording my voice